

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 1-9 are now present in the application. Claim 1 has been amended. Claims 8 and 9 have been added. Claim 1 is independent. Reconsideration of this application, as amended, is respectfully requested.

Information Disclosure Citation

Applicants have submitted the references supplied with the Information Disclosure Statement filed August 29, 2003 for consideration by the Examiner. However, Applicants have not received an initialed copy of the PTO-1449 form indicating that the references have been considered by the Examiner. The Examiner is courteously requested to provide Applicants with an initialed copy of the PTO-1449 form filed therewith with the next official communication.

Claim Rejections Under 35 U.S.C. §§ 102 & 103

Claims 1, 5 and 7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Helling, U.S. Patent No. 4,751,434. Claims 1, 6 and 7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Van Duijneveldt, U.S. Patent No. 5,971,567. Claims 2, 3 and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Duijneveldt. These rejections are respectfully traversed.

In light of the foregoing amendments to the claims, Applicants respectfully submit that these rejections have been obviated and/or rendered moot. As the Examiner will note, independent claim 1 has been amended to recite a combination of elements including “each of which is bent into a substantial S-shape having three straight portions and two connection portions connected with the neighboring straight portions respectively”, “the lamps are mounted side by side on a frame” and “interval pitches between adjacent straight portions of each of the lamps being substantially equal, a pitch between adjacent straight portions of adjacent lamps being substantially equal to the interval pitches”. Applicants respectfully submit that the above combination of elements as set forth in amended independent claim 1 is not disclosed nor suggested by the references relied on by the Examiner.

Helling discloses two neon tubes 15 and 17 (see FIG. 1). Van Duijneveldt discloses two lamps 24 and 25 (see FIG. 3A). Each of the neon tubes/lamps has a winding shape and includes six straight portions and five connection portions. Applicants respectfully submit that the winding shape of Helling’s neon tube or Van Duijneveldt’s lamp is not synonymous with the “substantial S-shape” as recited in claim 1. In addition, Helling’s neon tubes 15 and 17 or Van Duijneveldt’s lamps 24 and 25 have six straight portions and five connection portions, not three straight portions and two connection portions as recited in claim 1.

Helling and Van Duijneveldt fail to teach "interval pitches between adjacent straight portions of each of the lamps being substantially equal, a pitch between adjacent straight portions of adjacent lamps being substantially equal to the interval pitches" as recited in claim 1.

To further clarify the present invention, Applicants submit that the present invention provide a feature that the intervals pitches between adjacent straight portions of each lamp (*i.e.*, internal pitches in the same lamp) are substantially to the pitch between adjacent straight portions of both lamps (*i.e.*, the external pitch between adjacent lamps). For example, FIG. 4 shows that the interval pitch P between the top straight portion and the middle straight portion of the lamp 12 is substantially equal to the middle straight portion and the bottom straight portion of the lamp 12; *i.e.*, the internal pitches in the same lamp are substantially the same. FIG. 4 also shows the interval pitch P between the middle straight portion and the lowest straight portion of the lamp 12 (internal pitch in the same lamp) is substantially equal to the pitch P between the bottom straight portion of the lamp 12 and the top straight portion of the lamp 22 (external pitch between adjacent lamps 12 and 22); *i.e.*, the internal and external pitches are substantially the same. Helling and Van Duijneveldt fail to teach this feature.

In particular, in Helling, the interval pitch between the lowest straight portion of the neon tube 15 and the highest straight portion of the neon tube 17 (external pitch) is clearly larger than the interval pitch

between the lowest straight portion of the neon tube 15 and the second lowest straight portion of the neon tube 15 (internal pitch). Similarly, in Van Duijneveltdt, the interval pitch between leftmost straight portion of the lamp 24 and the leftmost straight portion of the lamp 25 (external pitch) is clearly smaller than the interval pitch between leftmost straight portion of the lamp 24 and the second leftmost straight portion of the lamp 24 (internal pitch). Accordingly, Helling and Van Duijneveltdt fail to teach this limitation.

Accordingly, neither of the references utilized by the Examiner individually or in combination teach or suggest the limitations of amended independent claim 1 or its dependent claims. Therefore, Applicants respectfully submit that claim 1 and its dependent claims clearly define over the teachings of the references relied on by the Examiner.

In particular, the Examiner asserted that Van Duijneveltdt in FIG. 3A teach that the lamps 24 and 25 are placed side by side in a parallel replica fashion as recited in claim 6. Applicants respectfully disagree. As shown in FIG. 3A of Van Duijneveltdt, at least the leftmost side and the rightmost side of the lamps 24 and 25 are not in a replica fashion. Since the electrodes of the lamps 24 and 25 face toward the opposite directions, it is impossible to place the lamps 24 and 25 in a parallel replica fashion as recited in claim 6.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §§ 102 and 103 are respectfully requested.

Additional Claims

Additional claims 8 and 9 have been added for the Examiner's consideration.

Dependent claim 8 recites "each of the two elongated lamps includes a first electrode facing toward a first direction and a second electrode facing toward a second direction opposite to the first direction, the first direction and the second direction being substantially parallel to the straight portions". As shown in FIG. 1 of Helling, the directions of the upper and lower electrodes of the neon tube 15 or 17 are perpendicular, not parallel to, the straight portions. As shown in FIG. 3A of Van Duijneveltdt, the left and right electrodes of the lamp 24 or 25 face toward to the same, not opposite directions. Accordingly, Helling and Van Duijneveltdt fail to teach the above recitation in claim 8.

Dependent claim 9 recites "the straight portions of one of the elongated lamps fail to interlace with the straight portions of the other of the elongated lamps". As showing in FIGs. 3A and 3B of Van Duijneveltdt, the straight portions of the lamp 24 interlace with the straight portions of the lamp 25. Accordingly, Van Duijneveltdt fails to teach the above recitation in claim 9.

Applicants respectfully submit that claims 8 and 9 are allowable due to the additional recitations included in these claims, as well as due to their respective dependence on independent claim 1.

Favorable consideration and allowance of additional claims 8 and 9 are respectfully requested.

CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but merely to show the state of the prior art, no further comments are necessary with respect thereto.


It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Joe McKinney Muncy, Registration No. 32,334 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 
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